

The
GREAT LAKES ENTOMOLOGIST



VOLUME XII (1979)

D. C. L. Gosling
Editor

Index compiled by George C. Heaton

PUBLICATION DATES

Number 1	7 Mar. 1979
Number 2	2 May 1979
Number 3	15 Oct. 1979
Number 4	21 Dec. 1979

Published by

THE MICHIGAN ENTOMOLOGICAL SOCIETY
c/o Department of Entomology
Michigan State University
East Lansing, Michigan 48824, U.S.A.

THE GREAT LAKES ENTOMOLOGIST

VOLUME XII (1979)

AUTHOR INDEX

- Armbrust, E. J. (See Barney, Robert J., E. J. Armbrust, R. E. Pausch and S. J. Roberts), 67.
- Armbrust, E. J. (See Barney, R. J., S. J. Roberts, R. D. Pausch, and E. J. Armbrust), 153.
- Armbrust, E. J. (See Pausch, R. D., S. J. Roberts, R. J. Barney, and E. J. Armbrust), 149.
- Armbrust, E. J. (See Roberts, S. J., E. J. Armbrust, R. J. Barney, and R. D. Pausch), 141.
- Armbrust, E. J. (See Roberts, S. J., D. P. Bartell, and E. J. Armbrust), 73.
- Barney, Robert J., E. J. Armbrust, R. D. Pausch and S. J. Roberts. Effect of Constant Versus Fluctuating Temperature Regimes on *Bathyplectes curculionis* (Hymenoptera: Ichneumonidae) Activity, 67.
- Barney, R. J., S. J. Roberts, R. D. Pausch, and E. J. Armbrust. Insect Predators of the Alfalfa Weevil and Clover Root Curculio (Coleoptera: Curculionidae) During Fall Field Reentry, 153.
- Bartell, D. P. (See Roberts, S. J., D. P. Bartell, and E. J. Armbrust), 73.
- Batzer, Harold O. and Daniel T. Jennings. Persistence of Jack Pine Budworm *Choristoneura pinus pinus*, (Lepidoptera: Tortricidae) Egg Mass Chorions on Jack Pine Foliage, 85.
- Beatty, J. A. and J. M. Nelson. Additions to the Checklist of Illinois Spiders, 49.
- Bland, R. G. Olfactory Detection of Alfalfa and Moisture by the Alfalfa Weevil (Coleoptera: Curculionidae), 101.
- Corneil, Jeffrey A. and Louis F. Wilson. Life History of the Butternut Curculio, *Conotrachelus juglandis* (Coleoptera: Curculionidae), in Michigan, 13.
- Corneil, Jeffrey A. (See Wilson, Louis F., Jeffrey A. Corneil and Walter A. Lemmien), 17.
- Cowan, David P. The Function of Enlarged Hind Legs in Oviposition and Aggression by *Chalcis canadensis* (Hymenoptera: Chalcididae), 133.
- Denison, Douglas L. and Peter G. Meier. Effects of Salmon Spawning Activity on Macroinvertebrates in a Small Michigan Stream, 57.
- Elliott, N. C. and W. E. Johnson. Protein Variation Among Species of the Genus *Catocala* (Lepidoptera: Noctuidae), 123.

- Ferrier, M. Drew and Thomas E. Wissing. Larval Retreat and Food Habits of the Net-Spinning Trichopteran *Cheumatopsyche analis* (Trichoptera: Hydropsychidae), 157.
- Flint, O. S., Jr. (See Masteller, E. C. and O. S. Flint, Jr.), 165.
- Foran, Jeffry (See Loesch, Alice and Jeffry Foran), 45.
- Hilsenhoff, William L. (See Steven, Jeffrey C. and William L. Hilsenhoff), 226.
- Hunt, Linda-Margaret. Observations of the Habits of *Lygaeus Kalmi angustomarginatus* (Hemiptera: Lygaeidae) in Southern Michigan, 31.
- Jennings, Daniel T. (See Batzer, Harold O. and Daniel T. Jennings), 85.
- Johnson, James H. and Neil H. Ringler. The Occurrence of Blow Fly Larvae (Diptera: Calliphoridae) on Salmon Carcasses and their utilization as Food by Juvenile Salmon and Trout, 137.
- Johnson, Mark D. (See Lager, Thomas M., Mark D. Johnson, Steven N. Williams, and Jeffery L. McCulloch), 109.
- Johnson, W. E. (See Elliott, N. C. and W. E. Johnson), 123.
- Jorgensen, Clive D., Mark E. Martinsen, and Layne J. Westover. Validating Michigan State University's Codling Moth Model (MOTHMDL) in an Arid Environment: A Test in Utah, 203.
- Kovalak, William P. (See Tindall, Marshall J. and William P. Kovalak), 105.
- Lager, Thomas M., Mark D. Johnson, Steven N. Williams and Jeffery L. McCulloch. A Preliminary Report on the Plecoptera and Trichoptera of Northeastern Minnesota, 109.
- Lemmien, Walter A. (See Wilson, Louis F., Jeffrey A. Corneil and Walter A. Lemmien), 17.
- Loesch, Alice and Jeffry Foran. An Outbreak of the Saddled Prominent Caterpillar, *Heterocampa guttivitta* (Lepidoptera: Notodontidae) on Beaver Island, Michigan, 45.
- Lorimer, Nancy. Differential Hatching Times in the Forest Tent Caterpillar (Lepidoptera: Lasiocampidae), 199.
- Lorimer, Nancy and William J. Mattson, Jr. Prediapause Hatching of the Forest Tent Caterpillar (Lepidoptera: Lasiocampidae) in the Laboratory, 119.
- Martinsen, Mark E. (See Jorgensen, Clive D., Mark E. Martinsen and Layne J. Westover), 203.
- Masteller, E. C. and O. S. Flint, Jr. Light Trap and Emergence Trap Records of Caddisflies (Trichoptera) of the Lake Erie Region of Pennsylvania and Adjacent Ohio, 165.
- Mattson, William J., Jr. (See Lorimer, Nancy and William J. Mattson, Jr.), 119.
- McCafferty, W. P. and M. C. Minno. The Aquatic and Semi-aquatic Lepidoptera of Indiana and Adjacent Areas, 179.
- McCulloch, Jeffery L. (See Lager, Thomas M., Mark D. Johnson, Steven N. Williams, and Jeffery L. McCulloch), 109.

- McPherson, J. E. Additions and Corrections to the List of Michigan Pentatomoidea (Hemiptera), 27.
- McPherson, J. E. A Revised List of the Pentatomoidea of Illinois (Hemiptera), 91.
- McPherson, J. E. Effects of Continuous and Split Developmental Photophases During Each 24 Hour Period on Adult Morphology in *Euschistus tristigmus tristigmus* (Hemiptera: Pentatomidae), 79.
- McPherson, J. E. Effects of Various Photoperiods on Color and Pubescence in *Thyanta pallidovirens accerra* (Hemiptera: Pentatomidae), 83.
- McPherson, J. E. Effects of various Photoperiods on Morphology in *Euschistus tristigmus tristigmus* (Hemiptera: Pentatomidae), 23.
- McPherson, J. E. (See Wilson, S. W. and J. E. McPherson), 189.
- McPherson, J. E. (See Wilson, S. W. and J. E. McPherson), 227.
- Meier, Peter G. (See Denison, Douglas L. and Peter G. Meier), 57.
- Miller, William E. Identity Corrections for Two North American *Apotomis* Moths (Tortricidae: Olethreutinae), 115.
- Minno, M. C. (See McCafferty, W. P. and M. C. Minno), 179.
- Mitchell, Lee and C. Lee Rockett. Vertical Stratification Preferences of Adult Female Mosquitoes in a Sylvan Habitat (Diptera: Culicidae), 219.
- Mockford, Edward L. Diagnoses, Distribution, and Comparative Life History Notes on *Aaroniella maculosa* (Aaron) and *A. eertmoedi* N. sp. (Psocoptera: Philotarsidae), 35.
- Mog, Thomas P. and J. A. Witter. Field Techniques for Assessing the Impact of the Spruce Budworm (Lepidoptera: Tortricidae) in Michigan's Upper Peninsula, 213.
- Nelson, J. M. (See Beatty, J. A. and J. M. Nelson), 49.
- Pausch, R. D. (See Barney, Robert J., E. J. Armbrust, R. D. Pausch and S. J. Roberts), 67.
- Pausch, R. D. (See Barney, R. J., S. J. Roberts, R. D. Pausch, and E. J. Armbrust), 153.
- Pausch, R. D. (See Roberts, S. J., E. J. Armbrust, R. J. Barney, and R. D. Pausch), 141.
- Pausch, R. D., S. J. Roberts, R. J. Barney, and E. J. Armbrust. Linear Pitfall Traps, A Modification of an Established Trapping Method, 149.
- Purrington, Foster Forbes. Biology of the Hyperparasitic Wasp *Perilampus similis* (Hymenoptera: Perilampidae), 63.
- Ringler, Neil H. (See Johnson, James H. and Neil H. Ringler), 137.
- Roberts, S. J., D. P. Bartell, and E. J. Armbrust. Evaluation of Two Systems Used to Extract Alfalfa weevil Larvae (Coleoptera: Curculionidae) From Alfalfa samples, 73.
- Roberts, S. J. (See Barney, Robert J., E. J. Armbrust, R. D. Pausch and S. J. Roberts), 67.

- Roberts, S. J., E. J. Armbrust, R. J. Barney, and R. D. Pausch. Seasonal Population Census of the Alfalfa Weevil, Clover Root Curculio, and Clover Leaf Weevil (Coleoptera: Curculionidae) in Southern Illinois, 141.
- Roberts, S. J. (See Barney, R. J., S. J. Roberts, R. D. Pausch, and E. J. Armbrust), 153.
- Roberts, S. J. (See Pausch, R. D., S. J. Roberts, R. J. Barney, and E. J. Armbrust), 149.
- Robertson, David J. An Annotated List of Stoneflies (Plecoptera) from Penitentiary Glen, Lake County, Ohio, 225.
- Steven, Jeffrey C. and William L. Hilsenhoff. *Ametropus newvei* (Ephemeroptera: Ametropodidae) in the Upper Peninsula of Michigan, 226.
- Taboada, Oscar. New Records of Leafhoppers (Homoptera: Cicadellidae) for Michigan, Including a Vector of X-Disease, 99.
- Talbot, Mary. Social Parasitism Among Ants at the E. S. George Reserve in Southern Michigan, 87.
- Tindall, Marshall J. and William P. Kovalak. Food Particle Sizes Consumed by Larval *Glossosoma nigrrior* (Trichoptera: Glossosomatidae), 105.
- Westover, Layne J. (See Jorgensen, Clive D., Mark E. Martinsen and Layne J. Westover), 203.
- Williams, Steven N. (See Lager, Thomas M., Mark D. Johnson, Steven N. Williams, and Jeffery L. McCulloch), 109.
- Wilson, Louis F., Jeffrey A. Corneil and Walter A. Lemmien. Susceptibility and Injury of some Hybrid Walnuts by the Butternut Curculio (Coleoptera: Curculionidae), 17.
- Wilson, Louis F. (See Corneil, Jeffrey A. and Louis F. Wilson), 13.
- Wilson, S. W. and J. E. McPherson. The First Record of *Megamelus palaeus* in Illinois (Homoptera: Fulgoroidea: Delphacidae), 227.
- Wilson, S. W. and J. E. McPherson. The First Report of the Occurrence of *Oecleus chrisjohni* and *O. epetrior* in Illinois (Homoptera: Fulgoroidea: Cixiidae), 227.
- Wilson, S. W. and J. E. McPherson. Notes on the Occurrence of *Epipyrops barberiana* in Southern Illinois (Lepidoptera: Epipyropidae), 189.
- Wissing, Thomas E. (See Ferrier, M. Drew and Thomas E. Wissing), 157.
- Witter, J. A. (See Mog, Thomas P. and J. A. Witter), 213.
- Witter, J. A. The Forest Tent Caterpillar (Lepidoptera: Lasiocampidae) in Minnesota: a Case History Review, 191.
- Wooldridge, David P. New World Limnichinae IV. *Eulimnichus* Casey. B. Descriptions of New Species (Coleoptera: Limnichidae), 1.

SUBJECT INDEX

- Aaroniella eertmoedi*, 35-44.
Aaroniella maculosa, 35-44.
Abacidus permundus, 153.
Acanalonia conica, 189, 190.
 Acanaloniidae, 189, 190.
Acanthepeira cherokee, 51.
Acantholoma denticulata, 91.
Acantholomidea denticulata, 91.
Acantholomidea porosa, 96.
Acanthomyops claviger, 88.
Acanthomyops interjectus, 88.
Acanthomyops latipes, 88.
Acanthomyops murphyi, 88.
Acanthomyops subglaber, 88.
Acetropus niveus, 184, 185.
Achaearanea porteri, 50.
Acheta pennsylvanica, 155.
 Acontiinae, 179, 181, 182.
Acroneuria abnormis, 112, 225.
Acroneuria carolinensis, 225.
Acroneuria internata, 112.
Acroneuria lycorias, 112, 225.
Acrosternum hilare, 94.
Acrosternum pennsylvanicum, 94.
Aedes canadensis, 220.
Aedes hendersoni, 219.
Aedes nigromaculis, 221.
Aedes sollicitans, 221.
Aedes sticticus, 220.
Aedes stimulans, 220.
Aedes triseriatus, 219-222.
Aedes trivittatus, 220.
Aedes vexans, 220-222.
Aelia americana, 93.
Aethus obliquus, 92.
Agarodes distinctum, 113.
Agathis metsneriae, 63-65.
 Agelenidae, 52.
Agelenopsis emertoni, 52.
Agelenopsis kastoni, 52.
Agrylea multipunctata, 168, 172.
Agrypnia improba, 112.
Agrypnia vestita, 168, 172.
Alfalfa weevil, 67, 73-78, 101-104,
 141-148, 153-155.
Aligia jucunda, 100.
Allocapnia minima, 111.
Allocapnia pygmaea, 111.
Allocoris nigra, 27.
Alloperla chloris, 225.
Alpaida calix, 51.
Amaurochrous brevitylus, 92.
Amaurochrous cinctipes, 92.
Amaurochrous parvulus, 92.
 Ametropodidae, 226.
Ametropus neavei, 226.
 Amnestinae, 92, 96.
Amnestus basidentatus, 96.
Amnestus pallidus, 92.
Amnestus pusillus, 92.
Amnestus spinifrons, 92.
Amphinemura delosa, 111, 225.
Amphinemura linda, 111.
 Amphipyriinae, 179-181.
Anabolia bimaculata, 113.
Anabolia consocia, 109, 113, 168.
Anahita animosa, 54.
Anopheles punctipennis, 220.
Anopheles quadrimaculatus, 220.
Antistea brunnea, 52.
 Antrodiaetidae, 49, 50.
Antrodiaetus unicolor, 50.
 Ants, 64, 87-89.
Anyphaena celer, 54.
Anyphaena maculata, 54.
 Anyphaenidae, 54.
Apateticus cynicus, 94.
Apateticus bracteatus, 94.
Apateticus (Apocilus) crocatus, 94.
Aphaenogaster rudis, 88.
Aphaenogaster temesseensis, 88.
Aphania deceptana, 117.
Aphania dextrana, 117.
Aphania salicaceana, 115.
Apotomis deceptana, 115-117.
Apotomis dextrana, 115-117.
Apotomis salicaceana, 115, 117.
 Arachnida, 49-56, 138, 139.
 Araneida, 49-56.
 Araneidae, 51, 52.
Araneus bicentenarius, 52.
Araneus bonsallae, 52.
Araneus cingulatus, 52.
Araneus gemmoides, 52.
Araneus gigas, 52.
Araneus guttulatus, 52.
Araneus niveus, 52.
Araneus partitus, 52.
Archanara laeta, 181.
Archanara oblonga, 181.
Archanara subflava, 181.
 Arctiidae, 179.
Arctopsyche, 161.
Argema obesa, 55.

- Argyractini, 184.
Argyrodes cancellatus, 50.
Argyrodes elevatus, 50.
Argyrodes fictilium, 50.
Argyrodes trigonum, 50.
Argyroploce dextrana, 117.
 Asiatic oak weevil, 146.
 Asopinae, 28, 29, 94, 96.
Atypoides hadros, 50.
Ballus youngii, 54.
Banasa calva, 94.
Banasa dimidiata, 94.
Banasa euchlora, 94.
Banasa packardii, 96.
Banasa sordida, 94.
Banksiola crotchii, 112, 168, 172.
Banksiola dossuaria, 168, 172.
Bathyplectes anurus, 69.
Bathyplectes curculionis, 67-71, 155.
Bellura densa, 181.
Bellura gortynoides, 181.
Bellura obliqua, 181.
 Black flies, 107.
 Black walnut curculio, 15.
 Blow Fly, 137-140.
 Brachycentridae, 113.
Brachycentrus americanus, 113.
Brachycentrus numerosus, 113.
Brachymeria compsiluræ, 135.
Brachymeria fonscolombæi, 135.
Brachymeria intermedia, 135.
 Braconidae, 63-65.
Brochymena arborea, 93.
Brochymena cartosa, 93.
Brochymena carolinensis, 29, 96.
Brochymena p. punctata, 93.
Brochymena quadripustulata, 93.
 Butternut curculio, 13-15, 17-21.
 Caddisflies, 105-108, 109, 112, 113,
 157-164, 165-177.
Callilepis pluto, 53.
 Calliphoridae, 137-140.
Calosoma spp., 154.
Calymnaria cavicola, 52.
Capnia montoba, 111.
 Capniidae, 111.
 Carabidae, 151, 153-155.
Castianeira amoena, 53.
Castianeira crocata, 53.
Castianeira variata, 53.
Catocala, 123-131.
Catocala amatræ, 129.
Catocala cara, 124, 126, 129.
Catocala concumbens, 124, 126, 127,
 129.
Catocala ilia, 124, 126, 127, 129.
Catocala semirelicta, 124, 126, 129.
Catocala unijuga, 124, 126, 127, 129.
 Cecidomyiidae, 64.
Ceraclea alagma, 169.
Ceraclea albosticta, 169, 176.
Ceraclea ancyla, 169, 174.
Ceraclea ancylus, 113.
Ceraclea annulicornis, 113.
Ceraclea cancellata, 169, 174.
Ceraclea diluta, 113, 169.
Ceraclea maculata, 113.
Ceraclea misca, 113.
Ceraclea neffi, 113.
Ceraclea resurgens, 113, 169, 174.
Ceraclea ruthæ, 169, 174.
Ceraclea sp., 113.
Ceraclea tarsipunctata, 169, 174, 175.
Ceraclea transversa, 169, 174.
Ceraticelus creolus, 51.
Ceraticelus micropalpis, 51.
Ceraticelus minutus, 51.
Ceratinopsidis formosa, 51.
Ceratinopsis laticeps, 51.
Ceratinopsis purpurescens, 51.
Ceratinopsis tarsalis, 51.
 Chalcididae, 133, 136.
Chalcis canadensis, 133-136.
Chalcis flebilis, 133.
Chalcis microgaster, 133.
Chewmatopsyche analis, 157-164, 167,
 171.
Chewmatopsyche campyla, 167, 170, 171.
Chewmatopsyche gracilis, 167, 171.
Chewmatopsyche halima, 167, 171.
Chilo forbesellus, 185.
Chilo plejadellus, 185.
Chimarra feria, 112.
Chimarra obscura, 112, 157, 167, 170.
Chimarra sociæ, 112.
Chiracanthium mildæi, 53.
 Chironomidae, 58, 59.
Chlorochroa persimilis, 93.
Chlorochroa uhleri, 93.
 Chloroperlidae, 112, 225.
Choristoneura fumiferana, 213-218.
Choristoneura pinus pinus, 85, 86.
Chrysendeton medicinalis, 182.
Chthonolasius, 88.
 Cicadellidae, 99, 100.
Cicindela, 154.
 Cixiidae, 227, 228.
 Clover leaf weevil, 141-149.
 Clover root curculio, 141-149, 153-155.
Clubiona bryantæ, 53.
Clubiona catawba, 53.
Clubiona kastoni, 53.
Clubiona moesta, 53.
 Clubionidae, 53, 54.
 Codling moth, 203-212.

- Coenus delius*, 93.
 Coleoptera, 1-11, 13-15, 17-21, 67-78,
 101-104, 135, 138, 139,
 141-149, 151, 153-155.
Colladonus flavocapitis, 100.
 Collembola, 139.
Conepeira miniata, 52.
Conotrachelus juglandis, 13-15, 17-21.
Conotrachelus retentus, 15.
Coquillettidia perturbans, 220.
Coras taugynus, 52.
Corimelaena (C.) agrilla, 92.
Corimelaena (C.) alpina, 92.
Corimelaena (C.) harti, 92.
Corimelaena (C.) marginella, 96.
Corimelaena lateralis, 27, 92.
Corimelaena nigra, 27, 95, 96.
Corimelaena obscura, 27, 92.
Corimelaena pulicaria, 92.
 Corimelaenidae, 27, 28, 91, 92.
Cosmopepla bimaculata, 93.
 Cosmopterygidae, 179.
 Crambinae, 179, 180, 185.
 Ctenidae, 49, 54.
Ctenium frontata, 50.
Culex erraticus, 220.
Culex nigripalpus, 221.
Culex pipiens pipiens, 219-222.
Culex restuans, 220.
Culex salinarius, 220.
Culex tarsalis, 220, 221.
 Culicidae, 219-223.
Culiseta inornata, 220.
Culiseta melanura, 221.
Cultus decisus, 225.
 Curculionidae, 13-15, 17-21, 67,
 73-78, 101-104, 141-148,
 153-155.
Cybaeus silicis, 52.
 Cydnidae, 92, 96.
 Cydninae, 92, 96.
Cydnoides ciliatus orientis, 28, 92.
Cydnoides (C.) renormatus, 92.
Cyrtipistomus castaneus, 146.
Cyrtomenus (C.) ciliatus, 92.
Cyrtomenus mirabilis, 92.
 Delphacidae, 227.
Dendrocoris humeralis, 94.
 Dermaptera, 138, 139.
Dictyna coloradensis, 55.
Dictyna cruciata, 55.
Dictyna formidolosa, 55.
Dictyna hentzi, 55.
 Dictynidae, 55.
Dikraneura mali, 99.
Diplectronea, 161.
Diplectronea modesta, 167, 171, 175.
Dipoena prona, 50.
 Diptera, 58, 59, 63, 64, 127, 128,
 133-135, 137-140, 151, 191,
 192, 194, 195, 219-223.
Dolichognatha pentagona, 52.
Dolomedes albineus, 52.
Dolophilodes distinctus, 112, 167,
 170.
Drassylus covensis, 53.
Drassylus fallens, 53.
Drassylus creolus, 53.
Drassylus frigidus, 53.
Drosophila, 127, 128.
Drosophila willistoni, 128.
 Dysderidae, 50.
Elasmostethus atricornis, 94.
Elasmostethus cruciatus, 94.
Elasmucha lateralis, 94.
Elipsocus maculosus, 35.
Empoasca convergens, 99.
Enoplognatha joshua, 50.
Enoplognatha rugosa, 50.
Enoplognatha tecta, 50.
Eoparargyraetis irroratalis, 184.
 Ephemeroptera, 138, 139, 226.
 Epipyropidae, 189, 190.
Epipyrops anomala, 189.
Epipyrops barberiana, 189, 190.
Ero furcata, 52.
Erythroneura spala, 99.
 Eucharitidae, 64.
Eulimnichus acutus, 1, 2, 7, 8, 10.
Eulimnichus analis, 10.
Eulimnichus ater, 10.
Eulimnichus californicus, 10.
Eulimnichus coheni, 1, 2, 4, 9.
Eulimnichus corrinae, 1, 3, 9.
Eulimnichus ephistemus, 9.
Eulimnichus evanescens, 10.
Eulimnichus impostus, 10.
Eulimnichus improcerus, 1, 4, 9.
Eulimnichus incultus, 1, 2, 6, 10.
Eulimnichus langleyae, 1-4, 9.
Eulimnichus montanus, 10.
Eulimnichus obscurus, 10.
Eulimnichus optatus, 10.
Eulimnichus nitidulus, 10.
Eulimnichus pellucidus, 1, 5, 9.
Eulimnichus perpolitus, 10.
Eulimnichus plebius, 10.
Eulimnichus rugulosus, 1, 2, 6, 7, 10.
Eulimnichus rusticus, 1, 7, 10.
Eulimnichus sharpi, 1, 2, 5, 9.
Eulimnichus sordidus, 9.
Eulimnichus spangleri, 1, 2, 8-10.
Eulimnichus subitatus, 1, 2, 8, 10.
Eulimnichus sublaevis, 9.
Eulimnichus visendus, 1, 2, 9.
 Eulophidae, 64, 65.

- Euphydryas editha*, 127, 128.
Euphydryas phaeton, 127, 128.
Eurygaster alternata, 91.
Eurygaster aternatus, 91.
Eurygaster amerinda, 91.
Eurygastrinae, 91.
Euryopsis quinquemaculata, 50.
Euschistus (E.) *ictericus*, 93.
Euschistus (E.) *politus*, 93.
Euschistus (E.) *servus*, 93, 95.
Euschistus (E.) *servus euschistoides*, 93.
Euschistus tristigmus luridus, 23, 79, 93.
Euschistus tristigmus pyrrhocerus, 23-26, 79, 80.
Euschistus tristigmus tristigmus, 23-26, 79-81, 93.
Euschistus (E.) *variolarius*, 93.
Euschistus subpunctatus, 95.
Euthyrhynchus floridanus, 96.
Evarthrus sodalis, 153.
Fieberiella florii, 100.
Flatidae, 189, 190.
Floricomus rostratus, 51.
Forest tent caterpillar, 119-121, 191-197, 199-201.
Formica creightoni, 87.
Formica dakotensis, 88.
Formica exsectoides, 88.
Formica lasioides, 87.
Formica obscuripes, 88.
Formica pallidefulva nitidiventris, 87, 88.
Formica pergandei, 87.
Formica nepticula, 88.
Formica rubicunda, 87.
Formica schaufussi, 87, 88.
Formica sp. (microgyna group), 88.
Formica sp. (sanguinea group), 87.
Formica subintegra, 87.
Formica subnuda, 87.
Formica subsericea, 87, 88.
Formica talbotae, 88.
Formica ulkei, 88.
Formica vinculans, 87.
Fulgoroidea, 189, 227, 228.

Galgupha (G.) *aterrima*, 91.
Galgupha (G.) *atra*, 91.
Galgupha (G.) *carinata*, 91.
Galgupha (G.) *denuadata*, 92.
Galgupha (G.) *loboprostethia*, 92.
Galgupha (G.) *ovalis*, 92.
Galgupha nigra, 95.
Galgupha (N.) *n. nitiduloides*, 92.
Gelechiidae, 63-65.
Geotomus pennsylvanicus, 92.
Glossosoma nigrior, 105-108.
Glossosomatidae, 105-108.
Glyphopsyche irrorata, 113.
Gnaphosidae, 53.
Gnaphosa fontinalis, 53.
Goerita sp., 168, 173.
Gonatium rubens, 51.
Graminella fitchii, 100.
Grammonota inornata, 51.
Grammonota pictilis, 51.
Greater milkweed bug, 31.
Gryllidae, 153-155.
Gryllus pennsylvanicus, 153-155.

Habronattus decorus, 54.
Hahnia flaviceps, 52.
Hahniidae, 52.
Halyini, 92.
Haplodrassus bicornis, 53.
Harpalus pennsylvanicus, 153-155.
Hastaperla brevis, 112.
Helicopsyche borealis, 113, 169, 174.
Helicopsychidae, 113, 169, 174.
Hemiargus isola, 127.
Hemiptera, 23-26, 27-29, 31-33, 79-81, 83, 84, 138, 139.
Heterocampa guttivitta, 45-47.
Holcostethus abbreviatus, 28, 96.
Holcostethus fulvipes, 28, 96.
Holcostethus limbolarius, 93.
Holcostethus piceus, 28, 93.
Homaemus aeneifrons, 91.
Homaemus bijugis, 91.
Homaemus parvulus, 91.
Homoptera, 99, 100, 139, 189, 190, 227, 228.
Hydatophylax argus, 113.
Hydropsyche alhedra, 167.
Hydropsyche betteni, 112, 157, 168, 171.
Hydropsyche bronta, 168, 171.
Hydropsyche cuanis, 112.
Hydropsyche dicantha, 168.
Hydropsyche morosa, 168, 171.
Hydropsyche orris, 112.
Hydropsyche recurvata, 168, 172.
Hydropsyche scalaris, 168.
Hydropsyche separata, 168, 172, 175.
Hydropsyche simulans, 112.
Hydropsyche slossonae, 168, 172, 175.
Hydropsyche sparna, 168.
Hydropsyche ventura, 168.
Hydropsychidae, 112, 157-164, 167, 171, 172.
Hydroptila consimilis, 168, 172.
Hydroptila perdita, 168, 172.
Hydroptila spatulata, 168, 172.
Hydroptila wabesiana, 168, 172.
Hydroptilidae, 112, 168, 172.

- Hymenarcys aequalis*, 93.
Hymenarcys nervosa, 93.
Hymenoptera, 29, 63-66, 67-71, 87-89
133-136, 138, 139, 155.
Hypera nigrirostris, 146.
Hypera postica, 67, 73-78, 101-104,
141-149, 153-155.
Hypera punctata, 141-149.
Hypsosinga funebris, 52.
Hypsosinga singaeformis, 52.
Hyssopus thymus, 64, 65.
Hysteropterum auroreum, 189.

Ichneumonidae, 67-71, 134.
Ironoquia lyrata, 168, 173.
Ironoquia punctatissima, 109, 113,
168, 173, 176.
Isoperla dicala, 112.
Isoperla frisoni, 112.
Isoperla lata, 112.
Isoperla namata, 225.
Isoperla orata, 112.
Isoperla signata, 112.
Isoperla slossonae, 112.
Isoperla transmearina, 112.
Issidae, 189, 190.

Jack Pine Budworm, 85, 86.
Lasiocampidae, 119-121, 191-197,
199-201.
Lasiochalcidia igiliensis, 135.
Lasius alienus, 88.
Lasius minutus, 88.
Lasius neoniger, 88.
Lasius speculiventris, 88.
Lasius umbratus, 88.
Laspeyresia pomonella, 203-212.
Laternaria candelaria, 189.
Lathys immaculata, 55.
Latrodectus curacaviensis, 50.
Latrodectus variolus, 50.
Leafhoppers, 99, 100.
Lepidoptera, 45-47, 63-65, 115-118,
119-121, 123-131, 139,
179-187, 189-197, 199-201,
203-212, 213-218.
Lepidostoma carrolli, 169.
Lepidostoma costalis, 169, 174.
Lepidostoma griseum, 169, 174.
Lepidostoma sackeni, 169, 174.
Lepidostoma sommermanae, 169, 174.
Lepidostoma togatum, 169.
Lepidostoma vernalis, 169.
Lepidostomatidae, 169, 174.
Lepthyphantes sabulosa, 51.
Leptoceridae, 113, 169, 174-176.
Leptocerus americanus, 169, 174, 175.
Leptothorax ambiguus, 87.
Leptothorax curvispinosus, 87.

Leptothorax duloticus, 87.
Leptothorax hirticornis, 88.
Leptothorax longispinosus, 87.
Lesser clover leaf weevil, 146.
Leucospidae, 135.
Leuctra ferruginea, 111.
Leuctra tenuis, 225.
Leuctridae, 111, 225.
Limephiliidae, 113, 168, 173, 174.
Limephilus indivisus, 168, 173.
Limephilus moestus, 168, 173.
Limephilus ornatus, 168, 173.
Limephilus submonilifer, 168, 173.
Limnichidae, 1-11.
Linyphiidae, 51.
Litopyllus rupicolens, 53.
Loxa sp., 95.
Loxosceles reclusa, 50.
Loxosceles rufescens, 50.
Lycosa georgicola, 53.
Lycosa hentzi, 53.
Lycosa pulchra, 53.
Lycosidae, 53.
Lygaeidae, 31-33.
Lygaeus kalmii angustomarginatus, 31-33.
Lype diversa, 112, 167, 170.

Macronema, 161.
Macronema zebratum, 112.
Malacosoma disstria, 119-121, 191-197,
199-201.
Mastophora bisaccata, 52.
Mastophora phrynosoma, 52.
Mayatrishia ayama, 112.
Maymena ambita, 51.
Mayrinia variegata, 95.
Mecidea major, 96.
Mecidea minor, 96.
Megacephala spp., 154.
Megamelus palietus, 227.
Melaneathus pennsylvanicus, 92.
Melaneathus robustus, 92.
Meneclis insertus, 93.
Metacalfa pruinosa, 189, 190.
Metaneria lappella, 63-65.
Micaria laticeps, 53.
Microgyna, 88.
Microporus obliquus, 92.
Mimetidae, 52.
Mimetus epeiroides, 52.
Mimetus puritanus, 52.
Mineus strigipes, 29, 94.
Molanna blenda, 113, 169.
Molanna tryphena, 113.
Molannidae, 113, 169.
Monomozium minimum, 88.
Mormidea (Melanochila) lugens, 93.
Mosquitoes, 219-223.

Munroessa gyralis serralinealis, 183.
Munroessa icciusalis icciusalis, 183.
Munroessa nebulosalis, 183.
Murgantia histrionica, 29, 94.
Mysema guttata, 51.
Mystacides longicornis, 169.
Mystacides sepulchralis, 113, 169,
175.

Nectopsyche albida, 169.
Nectopsyche candida, 113.
Nectopsyche exquisita, 169.
Nemotaulius hostilis, 113, 168, 173.
Nemouridae, 111, 225.
Neocataclysta magnificentis, 182.
Neodiprion excitans, 29.
Neodiprion spp., 64.
Neorastria caduca, 181, 182.
Neoperla clymene, 112.
Neophylax antiqua, 168.
Neophylax concinnus, 168.
Neophylax nacatus, 113.
Neoscona domicillorum, 52.
Neottiglossa cavifrons, 93.
Neottiglossa sulcifrons, 93.
Neottiglossa trilineata, 96.
Neottiglossa undata, 93.
Neureclipsis crepuscularis, 167, 170.
Nezara viridula, 94.
Noctuidae, 123-131, 179-182.
Notodontidae, 45-47.
Nyctiophylax affinis, 167, 170.
Nyctiophylax celta, 112.
Nyctiophylax moestus, 112.
Nymphalidae, 123, 128.
Nymphula ekthlipsis, 182.
Nymphulinae, 179, 180, 182-184.
Nymphulini, 182-184.

Occidentalia comptulalis, 185.
Odontomyia, 133.
Oebalus p. pugnax, 93.
Oecetis avara, 113.
Oecetis cinerascens, 113, 169, 175.
Oecetis ditissa, 169.
Oecetis immobilis, 169.
Oecetis inconspicua, 169, 175.
Oecetis ostent, 169, 170.
Oecetis persimilis, 169, 175.
Oecleus borealis, 227, 228.
Oecleus chrisjohni, 227, 228.
Oecleus epetron, 227, 228.
Oecleus productus, 227, 228.
Oecleus tamiamus, 228.
Olethreutes deceptana, 115.
Olethreutinae, 115-118.
Oligia diversicolor, 180.
Oncometopia undata, 99.
Oncopeltus fasciatus, 31.

Oonopidae, 49, 50.
Orchestina saltitans, 50.
Orthoptera, 153-155.
Ossiannilssonola berenice, 99.
Ossiannilssonola phryne, 99.
Ostrinia penitalis, 182.
Oxyethira forcipata, 168.
Oxyopes aglossus, 53.
Oxyopidae, 53.

Pachycorinae, 91, 96.
Pachygnatha brevis, 52.
Palaegapetus celsus, 168.
Pangaeus (H.) bilineatus, 92.
Paracapnia angulata, 111.
Paracornicularia bicapillata, 51.
Paragnetina media, 112.
Paraponyx allionealis itealis, 184.
Paraponyx badiusalis, 183.
Paraponyx curviferalis, 183.
Paraponyx maculalis, 183.
Paraponyx obscuralis, 183.
Parargyraetis bifascialis, 184.
Parargyraetis sp., 184.
Parasyche apicalis, 168.
Pardosa lapidicina, 53.
Pentatomidae, 23-26, 28, 29, 79-81,
83, 84, 92, 95, 96.
Pentatominae, 28, 92, 96.
Pentatomini, 93.
Pentatomoidea, 27-29, 91-98.
Peribalus abbreviatus, 28.
Peribalus limbolarius, 93.
Peribalus piceus, 28, 93.
Perilampidae, 63-66.
Perilampus hyalinus, 64.
Perilampus similis, 63-66.
Perillus bioculatus, 94.
Perillus circumcinctus, 94.
Perillus exaptus, 94.
Perlesta placida, 112.
Perlidae, 112, 225.
Perlinella drymo, 112.
Periodidae, 112, 225.
Phanetta subterranea, 51.
Phasganophora capitata, 112.
Phidippus cardinalis, 54.
Phidippus pius, 54.
Phidippus putnami, 54.
Philodromus bimuricatus, 54.
Philodromus infuscatus, 54.
Philodromus keyserlingi, 54.
Philodromus minutus, 54.
Philodromus montanus, 54.
Philodromus oneida, 54.
Philodromus placidus, 54.
Philodromus praelustris, 54.
Philodromus pratensiae, 54.
Philopotamidae, 112, 167.

- Philotarsidae, 35-44.
Philotarsus, 35.
Phimodera binotata, 91.
Phlegra fasciata, 54.
 Pholcidae, 50.
Phoroncidia americana, 50.
Phrurotimpus illudens, 53.
Phryganea cinerea, 112, 168.
Phryganea sayi, 168, 173.
 Phryganeidae, 112, 168, 171, 173.
Phyciodes tharos, 127.
Phylocentropus lucidus, 167, 170.
Phylocentropus placidus, 112.
Pirata alachua, 53.
Pirata spiniger, 53.
 Pisauridae, 52, 53.
Pisaurina dubia, 53.
 Planthoppers, 189, 190.
Platycentropus radiatus, 168, 173.
 Platygasteridae, 134.
 Plecoptera, 109, 111, 112, 138, 139, 225.
 Podagrionidae, 135, 136.
Podisus fretus, 28, 29, 96.
Podisus maculiventris, 94.
Podisus modestus, 94.
Podisus placidus, 94.
Podisus serieiventris, 94.
Podmosta macdunnoughi, 111.
 Podopinae, 92.
 Polycentropodidae, 112, 167, 170, 171.
Polycentropus blickeli, 167, 171.
Polycentropus centralis, 112, 167, 171, 175.
Polycentropus cinereus, 112, 167, 171.
Polycentropus clinei, 167.
Polycentropus confusus, 167.
Polycentropus crassicornis, 167, 171.
Polycentropus elarus, 167.
Polycentropus intermptus, 112, 167, 171.
Polycentropus maculatus, 167.
Polycentropus pentus, 167, 171.
Polycentropus remotus, 112, 167.
Polyergus lucidus, 87.
Potamyia flava, 168, 172.
Prescottia lobata, 99.
Prionosoma podopioides, 94.
Prostota completa, 111.
Proxys punctulatus, 93.
Pseudostenophylax uniformis, 169, 173.
 Psocoptera, 35-44.
Psorophora ferox, 220.
Psychomyia flavida, 112.
 Psychomyiidae, 112, 167, 170.
 Pteronarcyidae, 111.
Pteronarcys pictetii, 111.
Ptilostomis ocellifera, 168, 173.
Ptilostomis postica, 168.
Pycnopsyche circularis, 169.
Pycnopsyche divergens, 169, 173.
Pycnopsyche guttifer, 113.
Pycnopsyche lepida, 169, 174.
Pycnopsyche luculenta, 169.
Pycnopsyche scabripennis, 113, 169, 174.
Pycnopsyche subfasciata, 169.
 Pyralidae, 179, 180, 182.
 Pyraustinae, 179, 180, 182.
Rachodrossus exlinae, 53.
Rhacognathus americanus, 94.
Rhyacophila banksi, 168, 172.
Rhyacophila carolina, 168, 172.
Rhyacophila fuscata, 168.
Rhyacophila glaberrima, 168.
Rhyacophila minor, 168.
Rhyacophila nigrita, 168.
Rhyacophila vibox, 112, 168.
 Rhyacophilidae, 112, 168, 172.
Rhytidolomia belfragii, 93.
Ribautiana foliosa, 99.
 Saddled Prominent Caterpillar, 45-47.
 Salticidae, 54.
sanguinea, 87.
Sarcophaga aldrichi, 191, 194, 195.
 Sarcophagidae, 191, 192, 194, 195.
Sassacus papenhoei, 54.
 Sawflies, 29, 64.
Scaphoideus atlantus, 99.
Scaphoideus diutius, 99.
Scaphoideus intricatus, 100.
Scaphoideus merus, 99.
Scaphytopius magdalenis, 99.
 Schoenobiinae, 179, 180, 184.
Schoenobius melinellus dispersellus, 185.
Schoenobius sordidellus, 185.
Sciocoris microphthalmus, 96.
Scotinella britcheri, 53.
Sootinella similis, 53.
 Scutelleridae, 91, 96.
 Scutelleroidea, 27-29.
Scytodes thoracica, 50.
 Scytodidae, 49, 50.
 Sehirinae, 92.
Sehirus cinctus albonotatus, 92.
Sehirus cinctus cinctus, 92.
 Sericostomatidae, 113.
Setodes oligia, 169.
Shipsa rotunda, 111.
Singa keyserlingi, 52.
Sitona hispidula, 141-149, 153-155.
Sitticus fasciger, 54.
Solubea pugnae, 93.
Soyedina vallicularia, 225.
Spermophora meridionalis, 50.
Speyeria, 123, 128.

- Sphingidae, 179.
 Spiders, 49-56.
Spilochalcis side, 135.
 Spruce budworm, 213-218.
Stemmops ornatus, 51.
Stethaulax marmorata, 91.
Stethaulax marmoratus, 91.
Stiretrus anchorage fimbriatus, 94.
 Stoneflies, 109, 111, 112, 225.
Stratiomyia, 133.
 Stratiomyidae, 133-135.
Streptanus confinis, 100.
Strophopteryx fasciata, 111.
Strotarchus piscatorius, 54.
Symphitopsyche slossonae, 112.
 Symphytognathidae, 40, 51.
Synclita oblitalis, 183.

 Taeniopterygidae, 111.
Taeniopteryx burski, 111.
Taeniopteryx nivalis, 111.
Tapinopa bilineata, 51.
Tetragnatha seneca, 52.
 Tettigellinae, 99.
Tetyra bipunctata, 96.
Thanatus rubicellus, 54.
 Theridiidae, 50, 51.
Theridion alabamense, 51.
Theridion albidum, 51.
Theridion antonii, 51.
Theridion berkeleyi, 51.
Theridion crispulum, 51.
Theridion flavonotatum, 51.
Theridion llano, 51.
Theridion lyricum, 51.
Theridion neshamini, 51.
Theridion pictipes, 51.
Thionia bullata, 189, 190.

Thionia elliptica, 190.
 Thomisidae, 54.
 Thrips, 64, 151.
Thyanta accerra, 94.
Thyanta calceata, 28, 83, 84, 94.
Thyanta custator, 28, 83, 94, 96.
Thyanta pallidovirens accerra, 83, 84.
Thymoites pallida, 51.
 Thyreocoridae, 27, 28, 95, 96.
 Tiger beetles, 151.
Tominotus communis, 96.
 Tortricidae, 85, 86, 115-118, 213-218.
Triadenodes injusta, 113, 169, 175.
Triadenodes marginata, 113.
Triadenodes nox, 169.
Triadenodes tarda, 113, 169, 175.
 Trichogrammatidae, 134.
Trichopepla atricornis, 93.
Trichopepla semivittata, 93.
 Trichoptera, 105-108, 109, 112, 113,
 138, 139, 157-164, 165-177.
Typhlocyba persephone, 99.
 Typhlocybinae, 99, 100.

Vanduzeeina borealis, 91.

 Weevils, 13-15, 17-21, 67, 73-78,
 101-104, 141-148.
Wormaldia moesta, 167, 170.
Wormaldia shawnee, 157.
Wulfila alba, 54.

Xysticus texanus, 54.

Zelotes duplex, 53.
Zicrona caerulea, 96.
Zora pumila, 54.
Zygoballus sexpunctatus, 54.